IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPELLANT :	Lundy LEWIS	CONFIRMATION NO.:	3634
SERIAL NUMBER :	09/577,231	EXAMINER:	David E. England
FILING DATE :	May 23, 2000	ART UNIT:	2143
FOR :	METHOD AND APPARATUS FOR COMPONENT TO SERVICE MAPPING IN SERVICE LEVEL MANAGEMENT (SLM)		

Appellant's Brief on Appeal Under 37 C.F.R. § 41.37

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Further to the Notice of Appeal dated **May 29, 2007**, Appellant hereby submits this Appellant's Brief on Appeal pursuant to 37 C.F.R. § 41.37.

The Director is authorized to charge the fee for filing an Appeal Brief pursuant to 37 C.F.R. § 41.20(b)(2), as well as any additional fees that may be due, or credit any overpayment of same, to Deposit Account No. 033975 (**Ref. No. 019287-0317297**).

08/30/2007 MAHMED1 00000125 033975 09577231
02 FC:1402 500.00 DA

Appeal Brief Under 37 C.F.R. § 41.37

I. Real Party in Interest

Computer Associates Think, Inc., the assignee of the present application, is the real party in interest.

II. Related Appeals and Interferences

The present application claims priority to U.S. Provisional Patent Application Serial No. 60/135,492, filed May 24, 1999, entitled "Method and Apparatus for Service Level Management." Appellants are also pursuing Appeals to the Board of Patent Appeals and Interferences in the following applications, each of which also claim priority to the U.S. Provisional Patent Application identified above:

(1) U.S. Patent Application Serial No. 09/577,232, entitled "Method and Apparatus for Service Analysis in Service Level Management (SLM)," filed May 23, 2000. Appellant's Brief on Appeal was filed April 23, 2007;

(2) U.S. Patent Application Serial No. 09/577,224, entitled "Method and Apparatus for Reactive and Deliberative Service Level Management (SLM)," filed May 23, 2000. Appellant's Request for Oral Hearing was filed July 17, 2007; and

(3) U.S. Patent Application Serial No. 09/577,225, entitled "Method and Apparatus for Service Level Management (SLM)," filed May 23, 2000. Appellant's Notice of Appeal was filed April 20, 2007.

III. Status of Claims

Pending: Claims 4 and 13-62 are pending.

Cancelled: Claims 1-3 and 5-12 are cancelled.

Rejected: Claims 4 and 13-62 stand rejected.

Allowed: No claims have been allowed.

On Appeal: Claims 4 and 13-62 are appealed.

IV. Status of Amendments

No amendments to the claims have been filed subsequent to the Final Office Action dated February 27, 2007 (hereinafter "Final Action").

V. Summary of Claimed Subject Matter

The following exemplary citations to the Specification and/or drawing figures are not exclusive, as other examples of support for claimed subject matter exist. As such, the following citations should not be viewed as limiting.

Independent Claim 4

According to various aspects of the invention, as recited in claim 4, for example, a method for monitoring a state of a service supported by a network may be provided (e.g., Specification at 3, lines 1-5). For example, the network may support the service using a plurality of network components (e.g., Specification at 4, lines 14-15), and the service may support a business process under service level management in association with a service level management domain (e.g., Specification at 1, line 29 – 2, line 12).

To monitor the state of the service, the method according to claim 4 may include, among other things, selecting one or more network components on which the service depends from among the plurality of network components (e.g., Specification at 4, lines 14-15; and Specification at 20, lines 1-18). The one or more selected network components may be mapped to the service (e.g., Specification at 20, lines 19-30), such that the state of the service can be determined by monitoring the one or more selected network components (e.g., Specification at 20, lines 19-30).

The state of the service may be monitored in order to detect a change in the state of the service (e.g., Specification at 13, lines 14-25). As a result, when the state of the service changes, an action may be performed to determine a cause of the change in the state of the service (e.g., Specification at 13, lines 25-27). For example, the action can include one or more of invoking a routine to determine an operational characteristic of at least one of the selected network components (e.g., Specification at 13, line 28), constructing a database query to

determine the operational characteristic of at least one of the selected network components (e.g., Specification at 13, line 29), and requesting a change to one or more parameters of at least one of the selected network components (e.g., Specification at 13, line 30).

Independent Claim 13

According to various aspects of the invention, as recited in claim 13, for example, a method for monitoring a service using an enterprise management system may be provided (e.g., Specification at 3, lines 1-5). For example, the service may support a business process that depends on at least a portion of a network (e.g., Specification at 19, line 26 – 20, line 18), and the business process may be subject to service level management in association with a service level management domain (e.g., Specification at 1, line 29 – 2, line 12).

To monitor a state of the service, the method according to claim 4 may include, among other things, mapping the service to one or more components of the network on which the service depends (e.g., Specification at 20, lines 19-30). The enterprise management system may monitor at least one parameter of the mapped network component, which indicates an operational characteristic of the network component, and which indicates the state of the service (e.g., Specification at 20, lines 19-30). The state of the service, in turn, may be indicative of a current level of service with respect to an agreed upon level of service, as specified in the service level agreement (e.g., Specification at 20, line 11 – 21, line 8).

The enterprise management system may determine the state of the service from the parameter of the monitored network component (e.g., Specification at 13, lines 14-25). As a result, the enterprise management system may provide service level management for the business process, for example, by monitoring the state of the service to determine the current level of service relative to the agreed upon level of service (e.g., Specification at 20, line 11 – 21, line 8).

Independent Claim 27

According to various aspects of the invention, as recited in claim 27, for example, a system for monitoring a service using an enterprise management system may be provided (e.g., Specification at 3, lines 1-5). For example, the service may support a business process

that can be performed in connection with at least a portion of a network (e.g., Specification at 19, line 26 – 20, line 18). Further, the business process may be subject to service level management in association with a service level agreement (e.g., Specification at 1, line 29 – 2, line 12).

To monitor the service, the system according to claim 27 may include, among other things, a mapping mechanism for mapping the service to one or more components of the network on which the service depends (e.g., Specification at 20, lines 19-30). The enterprise management system may be associated with a mapping mechanism that monitors at least one parameter of the mapped network component (e.g., Specification at 20, lines 19-30). The monitored parameter indicates an operational characteristic of the network component, and which indicates the state of the service (e.g., Specification at 20, lines 19-30). The state of the service, in turn, may be indicative of a current level of service with respect to an agreed upon level of service, as specified in the service level agreement (e.g., Specification at 20, line 11 – 21, line 8).

A reasoning mechanism at the enterprise management system may determine the state of the service from the parameter of the monitored network component (e.g., Specification at 13, lines 14-25). As a result, the enterprise management system may provide service level management for the business process, for example, by monitoring the state of the service to determine the current level of service relative to the agreed upon level of service (e.g., Specification at 20, line 11 – 21, line 8).

Independent Claim 49

According to various aspects of the invention, as recited in claim 49, for example, a computer program product may include a computer-readable medium having computer logic recorded thereon for enabling a processor in a computer system to monitor a service using an enterprise management system (e.g., Specification at 3, lines 1-5). For example, the service may support a business process that depends on at least a portion of a network (e.g., Specification at 19, line 26 – 20, line 18). Further, the business process may be subject to

service level management in association with a service level agreement (e.g., Specification at 1, line 29 – 2, line 12).

To monitor the service, the computer program product according to claim 49 may be adapted to cause the computer system to map at least one component of the network on which the service depends (e.g., Specification at 20, lines 19-30), and to monitor, at the enterprise management system, at least one parameter of the mapped network component (e.g., Specification at 20, lines 19-30). The monitored parameter indicates an operational characteristic of the network component, in addition to indicating the state of the service (e.g., Specification at 20, lines 19-30). The state of the service, in turn, may be indicative of a current level of service with respect to an agreed upon level of service, as specified in the service level agreement (e.g., Specification at 20, line 11 – 21, line 8).

The enterprise management system may determine the state of the service from the parameter of the monitored network component (e.g., Specification at 13, lines 14-25). As a result, the enterprise management system can provide service level management for the business process, for example, by monitoring the state of the service to determine the current level of service relative to the agreed upon level of service (e.g., Specification at 20, line 11 – 21, line 8).

VI. Grounds of Rejection to be Reviewed on Appeal

(1) Claim 4 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,304892 to Bhoj et al. ("Bhoj") in view of U.S. Patent No. 6,249,755 to Yemini et al. ("Yemini"). Final Action at 2-4.

(2) Claims 13-17, 19-35, 37-53, and 55-62 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Yemini in view of Bhoj, and further in view of U.S. Patent No. 6,052,722 to Taghadoss ("Taghadoss"). Final Action at 4-11.

(3) Claims 18, 36, and 54 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Yemini, Bhoj, and Taghadoss, and further in view of U.S. Patent No. 6,233,449 to Glitho et al. ("Glitho"). Final Action at 11-12.

VII. Argument

A. *The Rejection of Claim 4 Should be Reversed Because the Examiner has Failed to Establish a* Prima Facie *Case of Obviousness.*

The Examiner has rejected claim 4 under 35 U.S.C. § 103 as allegedly being unpatentable over Bhoj in view of Yemini. Final Action at 2-4. This rejection is improper, and must be reversed, for at least the reason that the Examiner has failed to establish either a *prima facie* case of obviousness, as the references relied upon, either alone or in combination, do not disclose, teach, or suggest every feature of the claimed invention. For at least this reason, the rejection is improper and must be reversed.

More particularly, neither Bhoj nor Yemini, either alone or in combination, disclose, teach, or suggest at least the feature of "selecting one or more network components on which the service depends from among the plurality of network components," as recited in claim 4, for example. The Examiner alleges that Bhoj teaches this feature of the claimed invention at col. 5, line 65 – col. 6, line 35, and further alleges that Yemini teaches this feature of the claimed invention at col. 8, lines 17-67. Final Action at 2-3. Appellant disagrees with the Examiner's assessment.

Regarding the alleged teachings of Bhoj, Appellant initially notes that Bhoj generally relates to "a federated system having . . . independently administered data service systems." Bhoj at Abstract. To this end, the passages of Bhoj relied upon by the Examiner describe "agreements among the data service systems . . . to share resources" in the federated system. Bhoj at col. 5, line 65 – col. 6, line 14. As a result, Bhoj relates to a system in which distinct data service systems share resources and other obligations "based on bilateral agreeements that are part of [service level agreements]." Bhoj at col. 6, lines 15-35.

Based on the foregoing, it is apparent that the portions of Bhoj relied upon by the Examiner do not disclose, teach, or suggest "selecting one or more network components on which the service depends from among the plurality of network components," as recited in claim 4, for example. On the contrary, Bhoj specifically relates to service level agreements (SLAs) between independent service systems, which "contain . . . details of information that will be shared among the data service systems." Bhoj at col. 6, lines 15-17. However, Bhoj

does not disclose, teach, or suggest that the agreements include a selection of "one or more network components on which the service depends from among the plurality of network components," as recited in claim 4, for example. Instead, Bhoj expressly states that "[t]he components of a SLA includes [*sic*] the parties of the SLA, the service objectives of the SLA, the responsibilities of the parties, the problem management, the penalty clauses, and so on." Bhoj at col. 6, lines 24-27.

Clearly, none of these SLA components disclose, teach, or suggest "selecting one or more network components on which the service depends from among the plurality of network components," as recited in claim 4, for example. In fact, Bhoj precludes selecting network components in the manner claimed for at least the reason that Bhoj prevents "any one domain [from] having complete access to each of the data service systems." Bhoj at col. 4, lines 14-18. For instance, Bhoj discusses providing "an abstract view of the underlying data service system to the service manager . . . that is independent of the underlying implementation." Bhoj at col. 11, lines 30-35. For at least these reasons, Bhoj does not disclose, teach, or suggest at least this feature recited in independent claim 4.

Furthermore, regarding the alleged teachings of Yemeni, Appellant initially notes that Yemeni relates generally to correlating events associated with managed components "for determining the source of a problem in a complex system." Yemeni at Abstract. To this end, the passages of Yemeni relied upon by the Examiner describe event correlation based on "generating efficient codes (sets of symptom events) for problem identification." Yemeni at col. 8, lines 3-7. Thus, the portions Yemeni relied upon by the Examiner establish a framework for diagnosing problems by "[s]pecifying an event model and a propagation model for classes of components in the system," and by "[c]reating a causality data representation of problems and symptoms . . . to be monitored." Yemeni at col. 8, lines 17-67.

However, the portions of Yemeni relied upon by the Examiner do not disclose, teach, or suggest "selecting one or more network components on which the service depends from among the plurality of network components," as recited in claim 4, for example. By contrast, Yemeni does not perform any selection of network components. In particular, Yemeni defines event models and propagation models in a way that includes "the exceptional events

associated with each class of component, their corresponding local symptoms, and the potential relationship with other components." Yemeni at col. 8, lines 20-23. Furthermore, Yemeni does not disclose, teach, or suggest a service that depends on selected network components. In fact, the portions of Yemeni relied upon by the Examiner are silent with regard to services. Thus, for at least the reasons that Yemeni comprehensively models information associated with every managed network component, and that Yemeni does not relate the modeled information to a service, Yemeni does not disclose, teach, or suggest a service that selectively depends on one or more network components, as recited in claim 4, for example.

Additionally, for similar reasons as given above, neither Bhoj nor Yemini, either alone or in combination, disclose, teach, or suggest at least the feature of "mapping the one or more selected network components to the service," as recited in claim 4, for example. In the Final Action, the Examiner alleges that Yemini teaches this feature of the claimed invention at col. 8, lines 17-67. Final Action at 3. Specifically, the Examiner alleges that, in Yemeni, "all components, when entered into the system, are automatically 'selected' to be monitored." Final Action at 12. As a result, "with respect to mapping the one or more selected network components to the service," the Examiner alleges that "Yemeni teaches a relationship to a service that has failed and a [matrix] to place this data in." Final Action at 13. Appellant disagrees with the Examiner's assessment.

As an initial matter, the relied upon passages of Yemeni simply do not disclose, teach, or suggest "selecting one or more network components on which the service depends from among the plurality of network components," or "mapping the one or more selected network components to the service," as recited in claim 4, for example. Rather, the event and propagation models described by Yemeni relate, at best, to event conditions and inter-component relationships associated with specific components. For example, Yemeni describes diagnosing problems by representing "problems, events and their causal relations both within a component and across components." Yemeni at col. 8, lines 40-43. Accordingly, for at least the reasons that Yemeni relates only to describing or representing network components, in and of themselves (i.e., without reference to services), Yemeni does not disclose, teach, or

suggest "mapping the one or more selected network components to the service," as recited in claim 4, for example.

The Examiner further alleges that "relationship information is also taught in Bhoj," identifying passages that allegedly "state the service a server would have such as email and a measurement and metrics that are available from each component that is being monitored." Final Action at 13 (citing Bhoj at col. 9, lines 25-52). Moreover, in the context of rejecting at least independent claim 13, the Examiner alleges that col. 5, line 65 – col. 6, line 35 of Bhoj teach a similar feature, which recites "mapping at least one component of the network on which the service depends to the service." Final Action at 5. Appellant disagrees with the Examiner's assessment.

For example, as discussed above, independent claim 4 separately recites "selecting one or more network components on which the service depends from among the plurality of network components," and "mapping the one or more selected network components to the service." Similarly, independent claim 13 recites "mapping at least one component of the network on which the service depends to the service." In other words, a service not only depends on one or more network components, but a state of the service depends on a mapping of the components to the service (e.g., "monitoring the one or more selected network components to determine the state of the service").

By contrast, the cited portions of Bhoj do not disclose, teach, or suggest "selecting one or more network components on which the service depends," or "mapping the one or more selected network components to the service," as recited in claim 4, for example. In fact, Bhoj specifically indicates that the service system disclosed therein does not selectively choose one or more network components that a service depends on. *E.g.*, Bhoj at col. 11, lines 24-40 ("The local system . . . collects <u>all</u> the management data from the local infrastructure and applications of the underlying data system"). Furthermore, to protect "proprietary [information] within a control domain, Bhoj disavows any techniques that would disclose, teach, or suggest "mapping the one or more selected network components to the service," as recited in claim 4. Instead, Bhoj discusses providing "an abstract view of the underlying data service system to the service manager . . . that is <u>independent of the underlying implementation</u>." Bhoj at col. 11, lines 30-

35. Thus, for at least these reasons, Bhoj clearly does not disclose, teach, or suggest "selecting one or more network components on which the service depends," or "mapping the one or more selected network components to the service," as recited in claim 4, for example.

Moreover, neither Bhoj nor Yemini, either alone or in combination, disclose, teach, or suggest at least the feature of "monitoring the one or more selected network components to determine the state of the service," as recited in claim 4, for example. The Examiner alleges that Bhoj teaches this feature of the claimed invention at col. 3, line 62 – col. 4, line 11 and col. 8, lines 3-20, and further alleges that Yemini teaches this feature of the claimed invention at col. 8, lines 17-67. Final Action at 2-3. Appellant disagrees with the Examiner's assessment.

Regarding the passages of Bhoj relied upon by the Examiner, the passages relate only to managing data between distinct service systems. In fact, Bhoj describes managing data between a requesting system and a responding system "without giving the requesting system complete access to the responding data service system." Bhoj at col. 3, line 62 – col. 4, line 11. Thus, for at least the reason that Bhoj "provides an abstact view of the underlying data service system" (e.g., Bhoj at col. 11, lines 30-35), Bhoj clearly does not disclose, teach, or suggest "monitoring the one or more selected network components to determine the state of the service," as recited in claim 4, for example. Furthermore, the relied upon passages of Bhoj simply do not disclose, teach, or suggest a mechanism that can "determine the state of the service," as Bhoj is silent with regard to a state of a service. For at least these reasons, Bhoj does not disclose, teach, or suggest at least this feature recited in independent claim 4.

Regarding the passages of Yemeni relied upon by the Examiner, the passages relate only to defining events and intercomponent relationships associated with a specific component. In fact, the cited portions of Yemeni do not disclose, teach, or suggest any type of "monitoring." Rather, the cited portions of Yemeni relate to an initialization activity for event correlation, which includes "generating efficient codes (sets of symptoms) for problem identification." Yemeni at col. 8, lines 6-7. As a result, the event model, propagation model, causality representation, and other aspects of the relied upon portions of Yemeni relate only to describing, representing, or otherwise modeling components. In other words, the relied upon portions of Yemeni do not disclose, teach, or suggest actively "monitoring the one or more

selected network components," as recited in claim 4, for example. Furthermore, the relied upon passages of Yemeni simply do not disclose, teach, or suggest a relationship between the models and a service. For at least this reason, Yemeni clearly does not disclose, teach, or suggest any mechanism that can "determine the state of the service," for example, by "monitoring the one or more selected network components," as recited in claim 4. For at least these reasons, Yemeni does not disclose, teach, or suggest at least this feature recited in independent claim 4.

Furthermore, for similar reasons as given above (i.e., that neither Bhoj nor Yemeni determine the state of a service), neither Bhoj nor Yemeni, either alone or in combination, disclose, teach, or suggest at least the feature of "when the state of the service changes, determining a cause of the change in the state of the service," as recited in claim 4. That is, for at least the reason that neither Bhoj nor Yemeni, either alone or in combination, provide awareness over "the state of the service," Yemeni does not disclose, teach, or suggest "determining a cause of the change in the state of the service," as recited in claim 4.

Accordingly, for at least the foregoing reasons, the Examiner has failed to establish a *prima facie* case of obviousness. In particular, Bhoj and Yemeni, either alone or in combination, fail to disclose, teach, or suggest every feature of independent claim 4. For at least this reason, the rejection is improper and must be reversed.

B. *The Rejection of Claims 13-17, 19-35, 37-53, and 55-62 Should be Reversed Because the Examiner has Failed to Establish a* Prima Facie *Case of Obviousness.*

The Examiner has rejected claims 13-17, 19-35, 37-53, and 55-62 under 35 U.S.C. § 103 as allegedly being unpatentable over Yemini and Bhoj, and in further view of Taghadoss. Final Action at 4-11. This rejection is improper, and must be reversed, for at least the reason that the Examiner has failed to establish either a *prima facie* case of obviousness, as the references relied upon, either alone or in combination, do not disclose, teach, or suggest every feature of the claimed invention. For at least this reason, the rejection is improper and must be reversed.

More particularly, for at least the reasons given above in Section A, Yemini and Bhoj, either alone or in combination, fail to disclose, teach, or suggest at least the features of "mapping at least one component of the network on which the service depends to the

service," "monitoring . . . at least one parameter of the mapped network component, the at least one parameter indicating an operational characteristic of the network component that is indicative of a state of the service," or "monitoring . . . the state of the service to provide service level management for the business process that indicates the current level of service relative to the agreed upon level of service," as recited in independent claim 13, for example. Therefore, because the Examiner alleges these features of the claimed invention to be taught by the combination of Yemini and Bhoj, the rejection is improper for at least the reasons given above in Section A.

However, Appellant further notes that the Examiner alleges that "Taghadoss teaches associating a component of the network to the service." Final Action at 6. Initially, Appellant notes that the Examiner's reliance on Taghadoss appears to be either superfluous (e.g., because Yemini and Bhoj are alleged to teach this feature), or a de facto admission that the Yemini and/or Bhoj are incorrectly relied upon. Nonetheless, as the relied upon portions of Taghadoss also fail to disclose, teach, or suggest the aforementioned features of the claimed invention, Taghadoss fails to cure the deficiencies of Yemini and Bhoj discussed above.

For example, Appellants have previously argued that the relied upon portions of Taghadoss merely relate to a "more efficient way of identifying the actual state and operational status of managed network resources." Taghadoss at col. 5, lines 24-30. While identifying the state and/or operational status of managed network resources may ultimately be correlated with a service (and perhaps ultimately correlated to a state of the service), the managed network resources on which the service depends must first be mapped to the service. For example, claim 13 recites "mapping at least one component of the network to the service on which the service depends" for the purpose of subsequently "monitoring, at the enterprise management system, at least one parameter of the mapped network component."

In proposing this argument, Appellant has sought to clarify the distinctions between network resources (or components) and services that depend on the network resources (or components). The passages of Taghadoss relied upon by the Examiner, however, fail to disclose, teach, or suggest mapping the actual state or operational status of managed network resources to a service, instead appearing to deal only with resource (or component) states. As

a result, when the Examiner alleges that "Applicant even admits in their arguments . . . that Taghadoss teaches a type of mapping," the Examiner apparently fails to appreciate the distinctions pointed out by Appellant.

Specifically, the portions of Taghadoss relied upon by the Examiner relate to a "more efficient way of identifying the actual state and operational status of managed network resources." These passages unequivocally limit their discussion to information associated with the network resources themselves. For example, as acknowledged by the Examiner, "Taghadoss states that a network resource could be 'physical hardware, subnetworks, networks, end-to-end paths, customers, etc.'" Final Action at 14. However, Taghadoss does not disclose, teach, or suggest "mapping at least one [resource] of the network on which the service depends to the service," as recited in independent claim 13, for example. Rather, Taghadoss expressly states that the described techniques relate to a "management system that monitors and controls network resources within a given network." Taghadoss at col. 5, lines 33-36. Notably, these passages do not indicate how the information associated with network services specifically map to a service that depends on the network resources. For at least this reason, Taghadoss fails to cure the aforementioned deficiencies of Yemini and Bhoj.

Accordingly, for at least the foregoing reasons, the Examiner has failed to establish a *prima facie* case of obviousness. In particular, Yemini, Bhoj, and Taghadoss, either alone or in combination, do not disclose, teach, or suggest every feature of independent claim 13. For at least this reason, the rejection is improper and must be reversed.

Claims 27 and 49 include features similar to those recited and discussed above with respect to claim 13. Claims 14-17, 19-26, 28-35, 37-48, 50-53, and 55-62 depend from and add features to one of claims 13, 27, and 49. Thus, the rejections of these claims are likewise improper and must be reversed for at least the same reasons.

C. *The Rejection of Claims 18, 36, and 54 Should be Reversed Because the Examiner has Failed to Establish a* Prima Facie *Case of Obviousness.*

The Examiner has rejected claims 18, 36 and 54 under 35 U.S.C. § 103 as allegedly being unpatentable over Yemini, Bhoj and Taghadoss, and in further view of Glitho. Final Action at 11-12. This rejection is improper, and must be reversed, for at least the reason that the

Examiner has failed to establish either a *prima facie* case of obviousness, as the references relied upon, either alone or in combination, do not disclose, teach, or suggest every feature of the claimed invention. For at least this reason, the rejection is improper and must be reversed.

More particularly, for at least the reasons given above in Sections A and B, Yemini, Bhoj, Taghadoss, either alone or in combination, fail to disclose, teach, or suggest each and every feature of independent claims 13, 27, and 49. Glitho fails to cure the deficiencies of Yemini, Bhoj, and Taghadoss discussed above in Sections A and B.

Accordingly, for at least the foregoing reasons, the Examiner has failed to establish a *prima facie* case of obviousness. In particular, Yemini, Bhoj, Taghadoss, and Glitho, either alone or in combination, do not disclose, teach, or suggest every feature of independent claims 13, 27, and 49. Claims 18, 36, and 54 depend from and add features to one of claims 13, 27, and 49. Thus, for at least the same reasons, the rejection is improper and must be reversed.

VIII. Claims Appendix

The pending claims (claims 4 and 13-62) are attached in **Appendix A.**

IX. Evidence Appendix

Appendix B: None.

X. Related Proceedings Appendix

Appendix C: None

Conclusion

For at least the foregoing reasons, Appellant respectfully submits that the claims are clear, definite, and allowable over the references relied upon by the Examiner. Therefore, reversal of the rejections is respectfully requested.

Date: **August 29, 2007**

Respectfully submitted,

By: _____

Rick A. Toering
Registration No. 43,195

PILLSBURY WINTHROP SHAW PITTMAN LLP
P.O. Box 10500
McLean, Virginia 22102
Main: 703-770-7900
Fax: 703-770-7901

Appendix A: Claims Appendix

1-3. **(Cancelled)**

4. **(Previously Presented)** A method of monitoring a state of a service supported by a network, wherein the network includes a plurality of network components, wherein the service supports a business process under service level management in association with a service level management domain, the method comprising the steps of:

selecting one or more network components on which the service depends from among the plurality of network components;

mapping the one or more selected network components to the service;

monitoring the one or more selected network components to determine the state of the service;

monitoring the state of the service to detect a change in the state;

when the state of the service changes, determining a cause of the change in the state of the service by performing an action, the action comprising one or more of:

invoking a routine to determine an operational characteristic of at least one of the selected network components,

constructing a database query to determine the operational characteristic of at least one of the selected network components, and

requesting a change to one or more parameters of at least one of the selected network components.

5-12. **(Cancelled)**

13. **(Previously Presented)** A method for monitoring a service, the service supporting a business process under service level management in association with a service level agreement, wherein the service is monitored by an enterprise management system, wherein

the business process depends on at least a portion of a network, the method comprising the steps of:

mapping at least one component of the network on which the service depends to the service;

monitoring, at the enterprise management system, at least one parameter of the mapped network component, the at least one parameter indicating an operational characteristic of the network component that is indicative of a state of the service, wherein the state of the service is indicative of a current level of service relative to an agreed upon level of service in the service level agreement;

determining, at the enterprise management system, the state of the service from the parameter of the monitored network component; and

monitoring, at the enterprise management system, the state of the service to provide service level management for the business process that indicates the current level of service relative to the agreed upon level of service.

14. (**Previously Presented**) The method of claim 13, wherein the method further comprises a step of, associating a parameter of the service with a parameter of the associated network component, the service parameter comprising a variable having a state which represents an operational characteristic of the service provided by the network.

15. (**Previously Presented**) The method of claim 14, wherein the method further comprises a step of, determining a value for the service parameter from the value of the associated network component parameter.

16. (**Previously Presented**) The method of claim 13, wherein the method further comprises a step of, invoking a mathematical simulation of the service to determine the state of the service.

17. (**Previously Presented**) The method of claim 13, wherein the method further comprises a step of, invoking a reasoning mechanism to determine the state of the network component.

18. (**Previously Presented**) The method of claim 13, wherein the method further comprises a step of, associating an agent with the monitored network component to generate an alarm when a value of a parameter of the monitored network component crosses a threshold.

19. (**Previously Presented**) The method of claim 13, wherein the method further comprises a step of, selecting a rule from a repository of rules associated with the state of the service, wherein the rule indicates an action based on the state of the service.

20. (**Previously Presented**) The method of claim 19, wherein the method further comprises a step of, invoking the action to implement the selected rule.

21. (**Previously Presented**) The method of claim 19, wherein the action comprises a step of, modifying a data structure having a representation of the operational characteristic of the service.

22. (**Previously Presented**) The method of claim 19, wherein the action comprises a step of, invoking a database query to determine the operational characteristic of the network component.

23. (**Previously Presented**) The method of claim 19, wherein the action comprises a step of, invoking a second reasoning mechanism to determine the operational characteristic of the network component.

24. (**Previously Presented**) The method of claim 19, wherein the action comprises a step of, invoking a routine to determine the operational characteristic of the network component.

25. (**Previously Presented**) The method of claim 20, wherein the reasoning mechanism comprises a step of, selecting rules from the rule repository and invoking actions to implement the selected rules until the service achieves a desired state.

26. (**Previously Presented**) The method of claim 14, wherein the service parameter represents at least one or more of the following operational characteristics of the service:

availability;

reliability;

usability;

integrity;

security;

performance;

configuration; and

status.

27. (**Previously Presented**) A system for monitoring a service, the service supporting a business process under service level management in association with a service level agreement, wherein the service is monitored by an enterprise management system, wherein the business process is performable in connection with at least a portion of a network, the system comprising:

a mapping mechanism for mapping a component of the network on which the service depends to the service;

a monitoring mechanism for monitoring at least one parameter of the mapped network component at the enterprise management system, the at least one parameter indicating an operational characteristic of the network component that is indicative of a state of the service, wherein the state of the service is indicative of a current level of service relative to an agreed upon level of service in the service level agreement;

a reasoning mechanism for determining, at the service management system, the state of the service from the parameter of the monitored network component; and

a service monitoring mechanism for monitoring, at the service management system, the state of the service supporting the business process to provide service level management of the business process that indicates the current level of service relative to the agreed upon level of service.

28. (**Previously Presented**) The system of claim 27, wherein the mapping mechanism associates a parameter of the service with the parameter of the associated network component, the service parameter comprising a variable having a state which represents an operational characteristic of the service provided by the network.

29. (**Previously Presented**) The system of claim 28, wherein a value for the service parameter is determined from a value of the parameter of the associated network component.

30. (**Previously Presented**) The system of claim 27, wherein the reasoning mechanism comprises a rule-based reasoning system for determining the condition of the service.

31. (**Previously Presented**) The system of claim 27, wherein the reasoning mechanism comprises a model-based reasoning system for determining the condition of the service.

32. (**Previously Presented**) The system of claim 27, wherein the reasoning mechanism comprises a case-based reasoning system for determining the condition of the service.

33. (**Previously Presented**) The system of claim 27, wherein the reasoning mechanism comprises a state-transition graph reasoning system for determining the condition of the service.

34. (**Previously Presented**) The system of claim 27, wherein the reasoning mechanism comprises a codebook reasoning system for determining the condition of the service.

35. (**Previously Presented**) The system of claim 27, wherein the reasoning mechanism determines the condition of the service from a mathematical simulation of the service.

36. (**Previously Presented**) The system of claim 28, wherein the system further comprises, an agent associated with the monitored network component to generate an alarm when the value of the parameter of the monitored network component crosses a threshold.

37. (**Previously Presented**) The system of claim 27, wherein the reasoning mechanism comprises:

a data structure holding a representation of an operational characteristic of the service;

a rule repository having a rule indicating an operation based on the state of the service; and

an inference mechanism selecting the rule from the rule repository applicable to the state of the service.

38. (**Previously Presented**) The system of claim 37, wherein the inference mechanism invokes the operation to implement the selected rule.

39. (**Previously Presented**) The system of claim 37, wherein the operation modifies the representation of the service in the data structure.

40. (**Previously Presented**) The system of claim 37, wherein the operation invokes a query to a database to determine the operational characteristic of the network component.

41. (**Previously Presented**) The system of claim 37, wherein the operation invokes a second reasoning mechanism to determine the operational characteristic of the service.

42. (**Previously Presented**) The system of claim 37, wherein the operation invokes an inspection of the operational characteristic of the network component.

43. (**Previously Presented**) The system of claim 37, wherein the inference mechanism selects rules from the rule repository and invokes operations to implement the selected rules until the service achieves a desired condition.

44. (**Previously Presented**) The system of claim 28, wherein the service parameter represents one or more of the following operational characteristics of the service:

availability;

reliability;

usability;

integrity;

security;

performance;

configuration; and

status.

45. (**Previously Presented**) The system of claim 27, wherein the network component comprises a transmission device.

46. (**Previously Presented**) The system of claim 27, wherein the network component comprises a transmission line.

47. (**Previously Presented**) The system of claim 27, wherein the network component comprises a computer system.

48. (**Previously Presented**) The system of claim 27; wherein the network component comprises an application.

49. (**Previously Presented**) A computer program product comprising a computer-readable medium having computer logic recorded thereon for enabling a processor in a computer system to monitor a service, the service supporting a business process under service level management in association with a service level agreement, wherein the service is monitored by an enterprise management system, wherein the business process depends on at least a portion of a network, the computer program adapted to cause the computer system to perform the steps of:

mapping at least one component of the network on which the service depends to the service;

monitoring, at the enterprise management system, at least one parameter of the mapped network component, the at least one parameter indicating an operational characteristic of the network component that is indicative of a state of the service, wherein the state of the service is indicative of a current level of service relative to an agreed upon level of service in the service level agreement;

determining, at the service management system, the state of the service from the parameter of the monitored network component; and

monitoring, at the service management system, the state of the service to provide service level management for the business process that indicates the current level of service relative to the agreed upon level of service.

50. (**Previously Presented**) The computer program product of claim 49, wherein the computer system further performs a step of, associating a parameter of the service with a parameter of the associated network component, the service parameter comprising a variable having a state which represents an operational characteristic of the service provided by the network.

51. (**Previously Presented**) The computer program product of claim 49, wherein the computer system further performs a step of, determining a value for the service parameter from the value of the associated network component parameter.

52. (**Previously Presented**) The computer program of claim 49, wherein the computer system further performs a step of, invoking a mathematical simulation of the service to determine the state of the service.

53. (**Previously Presented**) The computer program of claim 49, wherein the computer system further performs a step of, invoking a reasoning mechanism to determine the state of the service.

54. (**Previously Presented**) The computer program of claim 49, wherein the computer system further performs a step of, associating an agent with the monitored network component to generate an alarm when a value of a parameter of the monitored network component crosses a threshold.

55. (**Previously Presented**) The computer program of claim 49, wherein the computer system further performs a step of, selecting a rule from a repository of rules associated with the state of the service, wherein the rule indicates an action based on the state of the service.

56. (**Previously Presented**) The computer program of claim 55, wherein the computer system further performs a step of, invoking the action to implement the selected rule.

57. (**Previously Presented**) The computer program of claim 55, wherein the computer system further performs a step of, modifying a data structure having a representation of the operational characteristic of the service.

58. (**Previously Presented**) The computer program of claim 49, wherein the computer system further performs a step of, invoking a database query to determine the operational characteristic of the network component.

59. (**Previously Presented**) The computer program of claim 53, wherein the computer system further performs a step of, invoking a second reasoning mechanism to determine the operational characteristic of the network component.

60. (**Previously Presented**) The computer program of claim 49, wherein the computer system further performs a step of, invoking a routine to determine the operational characteristic of the network component.

61. (**Previously Presented**) The computer program of claim 49, wherein the computer system further performs a step of, selecting rules from the rule repository and invoking actions to implement the selected rules until the service achieves a desired state.

62. (**Previously Presented**) The computer program of claim 49, wherein the service parameter represents one or more of the following operational characteristics of the service:

availability;

reliability;

usability;

integrity;

security;

performance;

configuration; and

status.

Appendix B: Evidence Appendix

None.

Appendix C: Related Proceedings Appendix

None.